4 AFFECTED ENVIRONMENT

4.1 TRANSPORTATION

Information in this section is from the *Interstate 84 Traffic Analysis, Orchard Street Interchange to Gowen Road Interchange* (Washington Group International, 2005).

4.1.1 Existing Roadway Characteristics

The existing traffic conditions and roadway configurations served as a baseline in the determination of the future improvements necessary throughout the project limits. Both the ITD and the ACHD have established traffic counting programs that provided most of the applicable traffic counts. Washington Group conducted AM and PM peak hour turning movement counts at several locations where count data was not available.

I-84 is a four-lane interstate freeway with 12-foot wide travel lanes and minimum 6-foot wide shoulders through the project area. The posted speed on I-84 is 65 mph from west of the Orchard Street interchange to east of the Broadway Avenue interchange, and 75 mph east of the Broadway Avenue interchange eastbound on the remainder of I-84 through the project area. The four interchanges are each basic diamond configurations with one merge (entry) lane and one diverge (exit) lane at each interchange. Orchard Street, Vista Avenue, and Broadway Avenue ramp terminals are signalized at both ramp terminals. The eastbound ramp terminal is signalized at the Gowen Road interchange while westbound ramp has controlled stop access for off bound traffic onto SH-21. Eisenmann Road interchange has two-way stop control at all ramp terminal intersections.

The roadways that connect to I-84 at interchanges within the project area are arterials or collectors feeding arterials at interchanges, as identified in Table 4.1.

Table 4.1. Arterial Roadways that Connect to I-84 at Interchanges within the Project Area

Street Name	Number of Lanes	Classification	Speed Limit
Orchard Street	5	Principal Arterial	35 mph
Vista Avenue	5	Principal Arterial	35 mph
Broadway Avenue	5	Principal Arterial	35 mph
Gowen Road	4	Minor Arterial	35 mph
Federal Way (South of Gowen Road Road)	4	Major Collector	45 mph
Federal Way (North of Gowen Road Road)	5	Principal Arterial	40 mph
Eisenmann Road	4	Minor Arterial	35 mph
Wright Street	2	Collector	35 mph

4.1.2 Existing Roadway Capacity Analysis

The existing capacity analysis was conducted on all eastbound and westbound I-84 mainline segments from west of the Orchard Street interchange to the Eisenmann Road interchange, interchange ramps from Orchard Street to Eisenmann Road, and ramp intersections where counts were performed. This analysis was completed using the Highway Capacity Software (HCS) 2000 software.

In order to conduct the existing capacity analysis, ADT data was converted to provide peak hour traffic volume estimates. The capacity analysis was conducted using the adjusted AM and PM peak hour volumes for the mainline and individual ramps and the adjusted existing intersection turning movement counts. The capacity of interchange ramps is calculated at the connection point between the interstate and the ramp. A summary of the capacity analysis results is shown in Table 4.2. LOS is described in Section 1.3.

The existing capacity analysis shows several mainline segments and ramps that already need improvement in order to maintain the desirable LOS D for the existing traffic conditions, leaving little or no margin for future growth throughout the project area. The estimated future growth of the region indicates there is a need for additional capacity on I-84.

4.1.3 2035 Capacity Analysis

Using 2035 travel demand modeling results², a capacity analysis was performed for the year 2035 to determine what improvements would be necessary to maintain an acceptable peak period LOS throughout the project limits. The Destination 2025 -2030 Limited Plan Update: Long-Range Transportation Plan for Ada County also identifies a peak hour LOS E as acceptable for urban freeway and arterial segments. As shown in Table 4.2, the projected LOS for several sections of I-84 and the interchange ramp terminals would not meet Ada County's policy of providing LOS E on I-84.

As a result, the 2035 model network was modified to increase the number of lanes on several mainline segments and ramps within the study area to provide increased capacity for the future traffic along I-84 and to meet LOS standards. The expanded roadway sections along the mainline were evaluated for lane balance and number of lanes based on the AASHTO guidelines. Improvements to the 2035 network increased the I-84 mainline from Cole Road to Broadway Avenue to four lanes with an auxiliary lane from Orchard Street to Vista Avenue, and from Vista Avenue to Broadway Avenue. East of Broadway

² The development of 2035 travel demand model on I-84 required an update to the COMPASS regional transportation model, which forecasts to the Year 2025. The traffic model was updated to year 2035 by conducting a capacity analysis and subsequently improving areas to provide a reasonable model of future traffic condition. COMPASS has since released Destination 2030 Limited Plan Update: Long Range Transportation (December 2004), which was also used to update the traffic modeling. The 2035 forecast assumes a 25 percent single-occupant vehicle mode share.

Avenue the number of lanes increased to three, and maintains the existing two lanes east of Gowen Road. Lanes were added and subtracted within the project limits in order to provide a balanced interstate lane configuration.

Table 4.2. Existing Capacity of I-84 Mainline and Ramps

Section	Level of Service (2006)	Level of Service (2035) (Existing Geometry)
Mainline		
Eastbound Cole to Vista Avenue	LOS E (AM/PM)	F
Eastbound Cole to Vista Avenue	LOS E (AM/PM)	F
Eastbound Vista Avenue to Broadway Avenue	LOS D (AM/PM)	F
Westbound Broadway Avenue to Vista Avenue	LOS E (PM)	F
Westbound Vista Avenue to Cole	LOS F (PM)	F
All other segments	LOS C (AM/PM)	N/A
Ramps		
I-84/Orchard Street on and off ramps	LOS F (PM)	B for on and F for off
I-84/Vista Avenue on and off ramps	LOS F (PM)	B for wb, on, F for all others
Eastbound I-84/Broadway Avenue off ramp	LOS D (AM/PM)	F
Westbound I-84/Broadway Avenue on ramp	LOS F (PM)	F
All other ramps	LOS C (AM/PM)	N/A
Intersections		
Gowen Road and I-84 westbound on and off ramp intersections	LOS F (AM/PM)	F for on and B for off
Broadway Avenue and I-84 eastbound on and off ramp intersections	LOS D (PM)	A for on and F for off
All other interchange intersections	LOS C or better AM/PM)	N/A

With those improvements in place, the year 2035 capacity analysis was conducted using AM and PM peak hour predictions for the mainline, weaving sections, and ramps. The LOS of the ramp is based on the capacity at the connection point between I-84 and the individual ramp.

The following conclusions were developed based on the 2035 travel demand model and capacity results:

 A minimum five-lane roadway (10 lanes total for both directions) would be needed to accommodate the 2035 forecast traffic volumes on I-84 west of the Broadway Avenue interchange.

- The existing Orchard Street, Vista Avenue, Broadway Avenue and Gowen Road interchanges are not adequate to meet the anticipated travel demands under forecast Year 2035 conditions.
- A minimum three-lane roadway (six lanes total for both directions) would be needed to accommodate the 2035 forecast traffic volumes on I-84 between Broadway Avenue and the Gowen Road interchange.
- A minimum two-lane roadway (four lanes total for both directions) would be needed to accommodate the 2035 forecast traffic volumes on I-84 east of the Gowen Road interchange.
- The most congested conditions occur in the PM peak hour on the westbound I-84 mainline between Broadway Avenue and Orchard Street.
- The COMPASS planning model demonstrates that additional mainline travel lanes would attract additional traffic from the nearby arterial roadway network. That additional traffic would result in similar levels of I-84 congestion as forecast for the 10-lane roadway design.
- The Eisenmann Road interchange would not require any improvements, other than signal installations at the westbound and eastbound off ramps, to meet the anticipated travel demand under Year 2035 conditions.

4.1.4 Pedestrian and Bicycle Facilities

There are limited bicycle and pedestrian facilities within the project area. The 2004 Ada County Bikeway Facilities Map does not identify any bike lanes or bike routes within the project area boundaries. The existing interchanges at Orchard Street, Vista Avenue, Broadway Avenue, and Gowen Road do not have adequate pedestrian or bicycle facilities. The interchange areas do not provide a safe environment for non-motorized travel across I-84, which is a barrier for north/south travel by bike or foot. In addition, the interchanges do not meet Americans with Disabilities Act (ADA) requirements to provide adequate facilities for those in wheelchairs.

Two future multi-use paths near the project area are identified In Chapter 5 of the City of Boise Comprehensive Plan, which includes future projects identified in the Comprehensive Park and Recreation Plan (2004). The Rail to Trails path would be located north of I-84 but would turn south in the vicinity of the Broadway Avenue interchange, where it would travel southeast before crossing I-84 in the vicinity of the Gowen Road interchange. The proposed Canal Path travels east/west, but would cross I-84 near the Orchard Street interchange.

4.1.5 Existing Transit Service

Valley Regional Transit (VRT) is the regional public transportation authority for Ada and Canyon counties in southwest Idaho. Its main responsibilities are to coordinate public transportation services in the two-county region and develop a regional public transportation system. VRT owns and operates the public bus system in Boise/Garden City and contracts for transit services for Nampa/Caldwell and between Ada and Canyon counties. These services are operated under the name ValleyRide.

ValleyRide operates the following buses near the project area:

- 1 Parkcenter (service Monday through Friday) This route provides service between downtown, southeast Boise (including Timberline High School), Federal Way and the Boise Airport. Route 1 runs every 30 minutes during the peak and every 60 minutes midday.
- #3 Vista (service Monday through Saturday) This route serves the Vista corridor, between downtown and the Airport. Route 3 runs every 30 minutes during the peak and every 60 minutes during the midday.
- #6 Orchard (service Monday through Saturday) This route provides two-way service on a long segment of Orchard between Fairview and Targee. The route also provides new two-way connections between Cole Valley Junior High School and residential neighborhoods to the south. Route 6 runs every 30 minutes during the peak and every 60 minutes during the midday.
- #29 Overland (service Monday through Saturday) This route connects Boise State University (BSU) and Towne Square Mall. There is a turnaround at BSU, which is simplified to provide two-way service over a longer segment of the route. Route 29 runs every 30 minutes during peak hours and every 60 minutes all day.
- #43 Caldwell Express A single express trip operates in each direction from Caldwell to Boise with connections made in downtown Boise and at the Airport.

ValleyRide also operates ACCESS, a transportation service available to people who are unable to utilize the bus system because of a disability. Access is a door-to-door transit service for the City of Boise. It operates Monday through Saturday with the same hours as the fixed-line bus system. There also is door-to-door paratransit service available in Nampa and Caldwell. The service operates Monday through Friday with the same hours as the fixed-line bus system.

4.2 LAND USE

Information for this section is from the *Land Use and Socioeconomic Technical Report* (David Evans and Associates, Inc., 2007).

4.2.1 Applicable Plans and Policies

4.2.1.1 State of Idaho Land Use and Transportation Plans and Policies

The *Idaho Transportation Plan* (ITP) is the statewide transportation plan that provides direction for the development of the state's transportation system. The ITP is an intermodal, long-range transportation plan that sets goals, objectives, and strategies for

meeting statewide targets for the performance of the transportation system. Applicable ITP goals are:

Goal 1: Transportation improvements will promote and sustain safe and efficient movement of people, goods, services, and information;

Goal 2: Transportation plans, programs, and strategies will integrate the intermodal needs of the state; and

Goal 3: Transportation decisions will protect the environment and promote energy efficiency.

The Idaho State Highway Plan (ISHP) provides an assessment of the highway needs for the state system and provides the framework for making decisions about future projects. The plan also establishes priorities for construction improvements to the state highway system in order to provide for a safe and efficient highway system. The ISHP identifies the need for capacity improvements and pavement reconstruction to that portion of I-84 that is within the project area.

Improvements to I-84 and to interchanges that are proposed in the project are also identified in the 2004-2008 State Transportation Improvement Program (STIP), which is a compilation of state and federally funded transportation projects that includes aeronautics, highways, highway safety, bicycle and pedestrian facilities, rail safety, and public transportation.

4.2.1.2 Regional and Local Land Use and Transportation Plans

Destination 2030 Limited Plan Update: Long Range Transportation (December 2004) is the regional plan that summarizes projects from multiple local and state studies, plans, and improvement programs, incorporating these plans by reference. Among the local planning sources used to develop the Destination 2030 Plan are the Destination 2025 and Destination 2020 (the previous regional plans); Ada County's 2002-2006 Transportation Improvement Program; the Boise City Comprehensive Plan; Ada County Comprehensive Plan; the Boise Airport Master Plan, and neighborhood plans for the Sunrise Rim and Vista Avenue neighborhoods.

Improvements to the I-84 mainline and reconstruction of three interchanges (Orchard Street, Vista Avenue, and Broadway Avenue) are identified as recommended projects in Chapter 5 of Destination 2025. In addition, improvements to the Union Pacific Railroad Bridge - Gowen Road Overpass and improvements to the Gowen Road eastbound offramp are identified as committed projects in Chapter 5 of Destination 2025. Preservation of additional right-of-way along the segment of I-84 from Gowen Road to the Eisenmann Road interchange for potential future widening is identified in Chapter 4 (Preservation of Transportation Corridors) in Destination 2030.

4.2.2 Existing Land Uses

4.2.2.1 Neighborhoods

The project area includes four neighborhoods with registered neighborhood associations: Sunrise Rim, Vista Avenue, Hillcrest, and Southeast Boise. The Sunrise Rim neighborhood is located between I-84 (south), the New York Canal (north), Owyhee Street (west), and Broadway Avenue Street (east) (Figure 4.1). In the immediate vicinity of I-84, residences are composed of 1970-era ranch and split level houses and duplexes, and newer condominiums and large single-family residences are located along the New York Canal in the northwest corner of the neighborhood. The northeast section of the neighborhood along New York Canal is generally made up of large custom-built homes on large lots. Within the Sunrise Rim neighborhood, office and commercial development is primarily along Vista Avenue from I-84 to the New York Canal. This development consists of hotels, service stations, a large bank clearing center, an office complex, and several business offices.

The Vista Avenue neighborhood is the only neighborhood within the project area that is not situated adjacent to I-84. The neighborhood is bound by the New York Canal (south), Overland Road (north), Roosevelt Street (west), and Federal Way (east). It is composed primarily of single-family homes built between 1950 and 1970. In general, housing within this neighborhood is relatively older and less expensive than housing in other parts of the city. Much of the housing stock in the Vista Avenue neighborhood is occupied by low- and moderate-income households. Multi-family residential and mobile home park developments are also found throughout the Vista Avenue neighborhood, with most of this development occurring south of Targee Street and east of Owyhee Street. Commercial development within the Vista Avenue neighborhood is found primarily along Vista Avenue, Orchard Street, and Federal Way.

The Hillcrest neighborhood is bordered by Orchard Street (north), I-84 (south), Curtis Street (west), and Owyhee Street (east), and is bisected by the New York Canal. The I-84/Orchard Street interchange functions as the main "gateway" into the Hillcrest neighborhood. The neighborhood is made up primarily of 1960s-era single-family detached homes and some scattered multi-family units. Major centers of activity include the Hillcrest Country Club and Golf Course. Commercial and office development is concentrated along I-84, Orchard Street, and Overland Road.

The Southeast Boise neighborhood is the largest neighborhood within the city, covering around one-eighth of the city's land area. It is bound by I-84 and Federal Way (west), the Boise River (east), Capitol Street (north), and extends south past Gowen Road. The neighborhood displays great diversity in terms of housing type (1950s- and 1960s-era single-family ranch homes, older 1910-era homes, manufactured homes, apartments, condominiums), and land use (residential, office/commercial, and industrial uses are all found within the neighborhood). Boise State University is located in the northwest

portion of this neighborhood. Major development includes the corporate offices of Albertsons, Inc. and Micron, Boise's largest employer.

In addition to the residential neighborhoods described above, a 63-unit recreational vehicle (RV) park is located directly south of I-84 between Vista Avenue and Broadway Avenue. The parcel where the RV park is located is zoned for commercial uses.

4.2.2.2 Commercial/Retail Uses

Commercial, retail, and office development is found throughout the project area, and is concentrated in areas north of I-84 along Orchard Street Avenue, northwest of the Vista Avenue interchange, and south of I-84 adjacent to and between the Orchard Street and Broadway Avenue interchanges. While commercial and retail properties within the project area vary greatly in terms of services and products offered, commercial and retail development near the airport focuses primarily on travel- and service-related businesses, such as car rental agencies, restaurants, and hotels. Major commercial development adjacent to the Gowen Road interchange includes the Boise Outlet Mall and the Shopko distribution center.

4.2.2.3 Boise Airport

The Boise Airport and adjoining commercial and industrial uses dominate the portion of the project area south of I-84. The City of Boise owns and operates the Boise Airport. Eleven regional and national airlines operate at the Airport, which serves as the primary commercial service airport for southwestern Idaho and eastern Oregon. The Airport has two active runways running east/west.

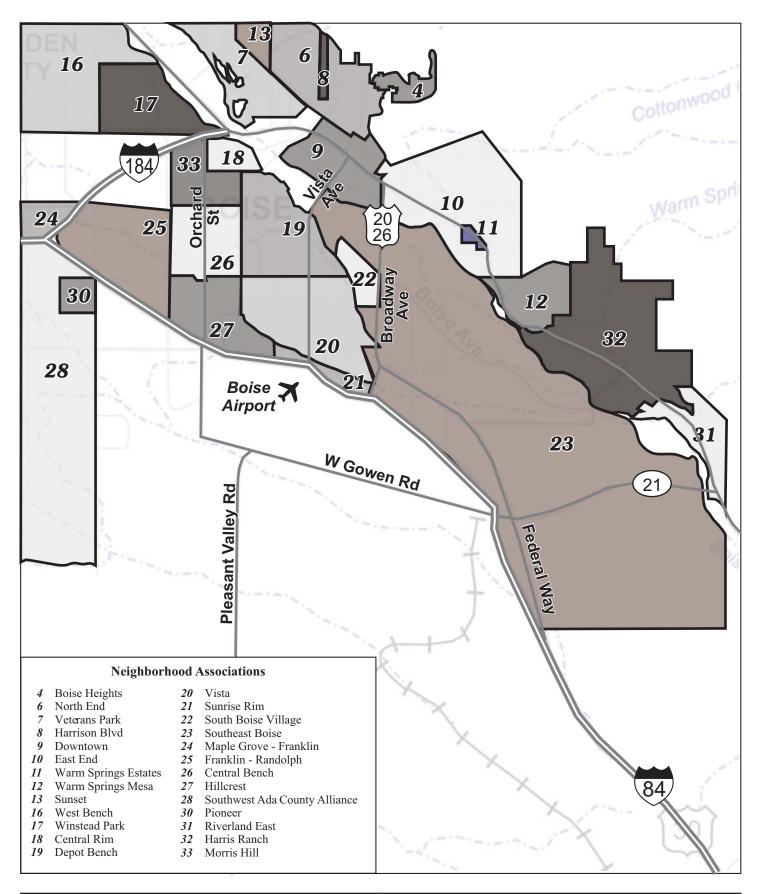
The majority of land uses surrounding the airport are airport related, such as the runways, terminal and parking area. Uses supporting the Boise Airport that are found between the terminal area and I-84 include hotels, some restaurants, and auto-related uses such as gas stations and vehicle service/sales businesses.

4.2.2.4 Industrial Uses

Most industrial development within the project area is found between the Broadway Avenue and Gowen Road interchanges. Industrial development within the project area includes such industrial uses as Micron Technology, whose corporate offices and semiconductor manufacturing facilities are located southeast of the Gowen Road interchange; Sysco Foods, which includes corporate offices and food distribution warehouses; and numerous other light industrial manufacturing businesses. Most vacant industrial-zoned land within the project area is found northeast of the Broadway Avenue interchange and southeast of the Gowen Road interchange in the Gateway East Industrial Park area. There are also two gravel operations, one located to the north and one to the south of I-84 between the Broadway Avenue and Gowen Road.

4.2.2.5 Farmland

No farm uses are located within the project area. The City of Boise and Ada County Comprehensive Plans do not document any agricultural or forest land uses in the project area. Tindahay fine sandy loam (4-8 percent slopes) was the only soil found on the soils of statewide importance list within the project study area, but is not considered by the Natural Resource Conservation Service (NRCS) to be of statewide importance because it is not irrigated.





4.2.2.6 Cultural/Historic Resources

Cultural and historic resources are described in the *Cultural Resources Screening:* Section 106 and 4(f) for the I-84 Orchard Street IC to Gowen Road IC Corridor Study (Bionomics, 2003). There are two properties within the project area that are eligible for listing on the National Register of Historic Places (NRHP): the New York Canal (01-955), which was planned in 1882 and constructed in 1909, and the Idaho Northern Pacific Railroad (01-10893), which was constructed in 1925 to provide passenger service between Nampa and Boise. There are no other historic or cultural resources within the project area. There are also no historic districts within the project area.

4.2.3 Comprehensive Plan

The proposed project is located within the City of Boise and unincorporated Ada County, as shown in Figure 4.2. Depending on location, either the city or county comprehensive plan and zoning designations would apply.

The *Boise City Comprehensive Plan*, shown in Figure 4.2, identifies the following residential land use designations within the project area:

- Rural Density, the lowest residential density category in the project area, limiting densities to one dwelling unit per acre;
- Low Density, which sets an overall residential density target of four to six dwelling units per acre;
- Medium Density, which includes townhouses, condominiums, and apartments with densities of eight to 15 units per acre;

Other Boise City comprehensive plan land use designations within the project area include Airport, which applies to the Boise Airport and allows for airport and airport-related activities; Commercial, which applies to standard retail commercial land use and allows for both high-density residential and commercial development; Office, which provides for standard office and some limited retail commercial development; and Industrial, which includes heavy and light manufacturing, warehousing, mini-storage, multi-tenant industrial parks, auto repair, and limited office and commercial uses.

4.3 SOCIAL AND ECONOMIC CONDITIONS

Information for this section is from the *Land Use and Socioeconomic Technical Report* (David Evans and Associates, Inc., 2005).

4.3.1 Demographics

4.3.1.1 Data Sources

The project area is generally within the Boise city limits, census tracts (CT) and block groups (BG) are the primary areas used for determining the effects to the socioeconomic

characteristics in the project area. However, at both the census tract and block group levels, some areas that would not be affected by the project are also included. Figure 4.3 shows the census tract and block group boundaries.

Demographic information from the 2000 Decennial Census was used to identify potential Environmental Justice issues within and near the project area. Six census tracts (and the corresponding 11 block groups) cover the project area as well as other areas where potential impacts from noise, traffic etc. could occur. Census data from the Boise Metropolitan Statistical Area (MSA) was also gathered for comparison and as a means to identify any potential disproportionate impacts to minority groups and persons living in poverty within census tracts and block groups in the study area.

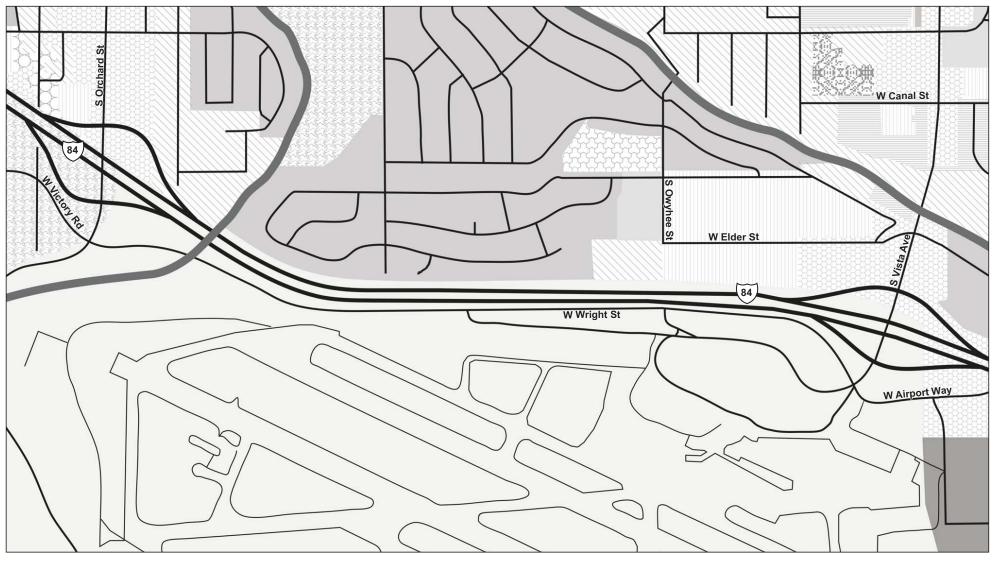
4.3.1.2 Population

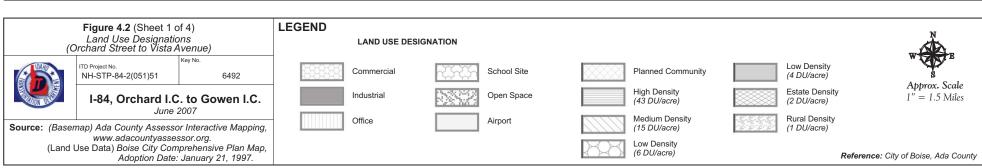
Boise and its surrounding areas have grown consistently in the last 30 years although, the strongest growth has occurred since 1990. Between 1990 and 2000, population growth within the city limits has occurred at an annual rate of four-percent and increased by nearly 50 percent in a ten-year period. However, much of the growth is occurring outside of the Boise city limits, as shown in the increase in population of the MSA, where the overall population has more than doubled since 1990 and has averaged nearly an eight-percent average annual growth rate between 1990 and 2000. Some of that growth is likely attributed to changes in the statistical area boundaries.

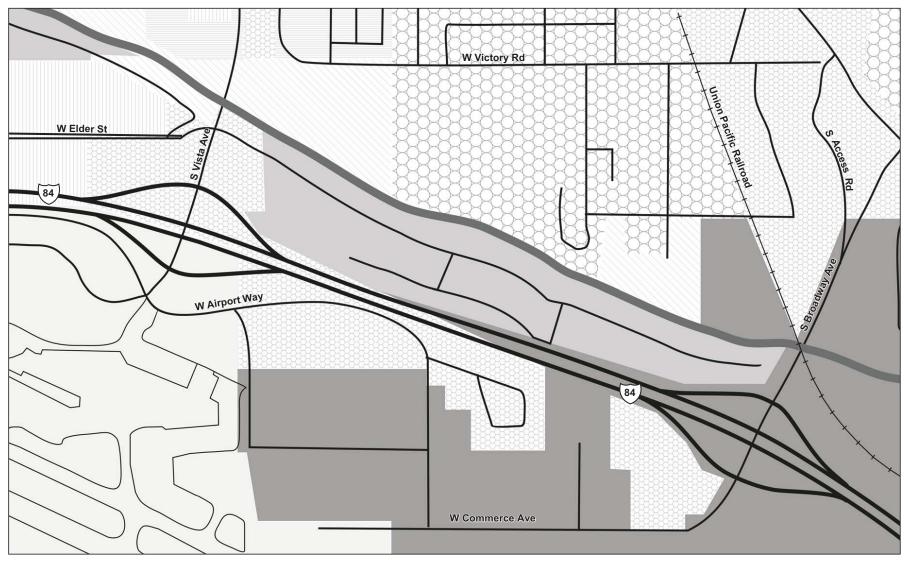
Within the project area, the highest population growth has occurred south and east of the airport with both areas growing faster than Boise for the same period. CT 21 has experienced the most growth of any census tract, averaging an 8.3 percent annual growth rate between 1990 and 2000. An exception to the growth trend is in CT 19, which has lost over four-percent of its population, mostly in BG 2 that decreased by more than 200 people between 1990 and 2000.

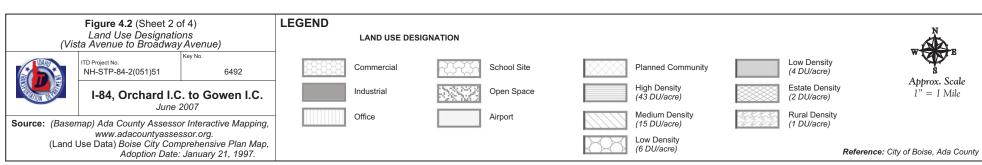
4.3.1.3 Households

The Boise MSA contains about 35 percent of all households within Idaho (Table 4.2). Not surprisingly, the number of households has increased the fastest in the Boise MSA, more than doubling since 1990. While some of this growth has occurred within the Boise city limits, it appears that the majority of growth is occurring on the city's periphery in Ada and Canyon Counties. CT 21 had the largest percentage of growth of any area between 1990 and 2000.

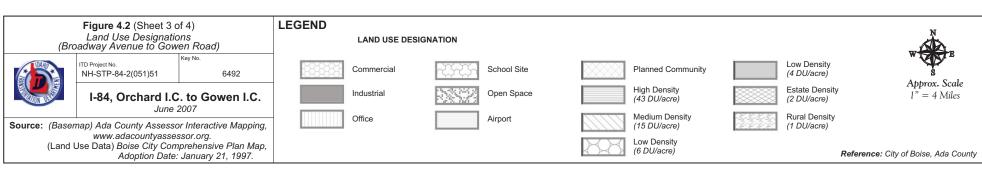




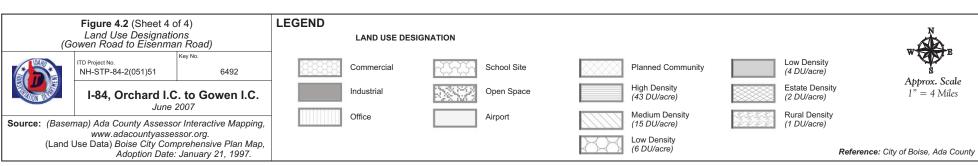


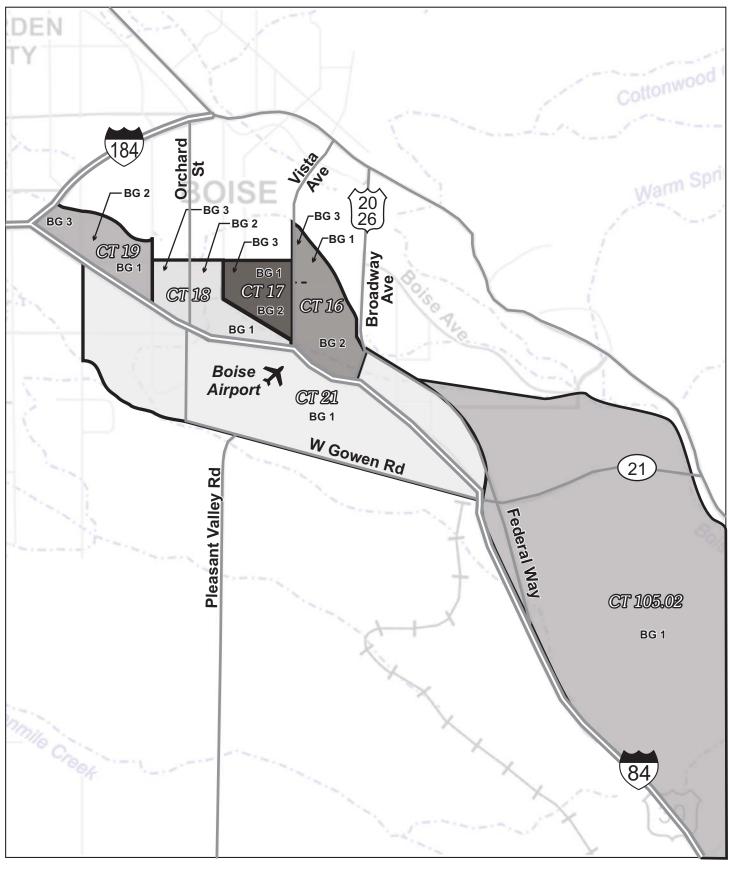


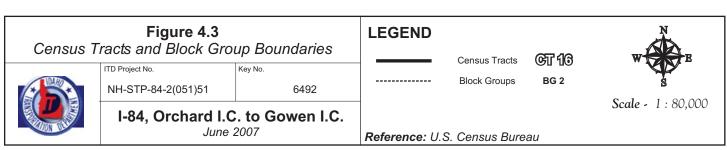












4.3.1.4 Housing Tenure

Regionally, approximately 70 percent of housing units are owner-occupied. Within the project area, ownership patterns vary considerably, with the highest homeownership rates occurring in CT 18 BG 1 (92 percent). CT 19 BG 2 (91 percent) CT 21 BG 1 (80 percent), and CT 105.02 BG 1 (81 percent). The majority of residential units are single-family detached units. CT 17 BG 2 is the only block group within the project area that has a higher percentage of rental units than the region; 57 percent of the dwelling units are renter occupied. BG 2 is also the location of large apartment complexes with twenty or more units, although smaller four-plexes are also common throughout the project area.

4.3.1.5 Income and Employment

At the census tract level, year 2000 median household incomes are higher than the Boise MSA in five of the seven tracts making up the study area, with only CT 16 and CT 17 making less. However, at the block group level, median household incomes vary within the project area.

According to the Idaho Department of Labor, total employment in the Boise MSA was estimated at nearly 230,000 jobs in 2002, with the majority of jobs concentrated in the services, retail and wholesale trade sectors. Retail trade employment is dominated by service industry jobs (restaurants etc.) and the majority of wholesale trade is in durable goods. The Boise MSA also has a significant number of manufacturing and government jobs, accounting for about 14 and 16 percent, respectively, of total jobs in the Boise MSA. The high number of government jobs reflects the position Boise holds as both the Ada County seat and the state capital. Boise's largest private employer is Micron Technology.

The Boise MSA has had a lower unemployment rate than either the state or nation since 1993, decreasing from 4.7 percent in 1993 to 3.4 percent in 2000. However, since 2000 unemployment in the Boise MSA has experienced a sharp increase. In 2003 the Bureau of Labor Statistics estimates that unemployment in the Boise MSA increased to 5.3 percent, the highest rate in the last 10 years. This high unemployment is similar to the trend experienced nationally, where unemployment was relatively low in the 1990s, but increased sharply since 2000. Idaho's unemployment rate was higher than both the nation and Boise MSA between 1997 and 2000, but has continued to decline to a point where the state unemployment rate is now lower than both the Boise MSA and nation at about five percent.

4.3.2 Environmental Justice

Executive Order (EO) 12898 requires agencies undertaking federal projects to evaluate whether any adverse human health or environmental impacts of the proposed project would fall disproportionately on low-income and minority populations in the project area,

and ensures outreach to and involvement of minority and low-income communities in the decision-making process.

An important component of EO 12898 is assuring that all portions of the population have a meaningful opportunity to participate in the development of federal projects regardless of race, color, national origin, or income. CEQ guidance states that agencies should acknowledge and seek to overcome linguistic, institutional, geographic, and other barriers to meaningful participation, and should incorporate active outreach to affected groups. The public involvement process is described in Section 7.1.

4.3.2.1 Racial Composition

The 2000 Census reported that the Boise MSA is approximately 90 percent white, which is slightly lower than Ada County (92.9 percent) or the state (91 percent). About nine-percent of residents within the Boise MSA also report themselves as Hispanic or Latino, which is a higher percentage than the county or the state.

Within the project area, census tract and block group data report similar percentages of racial and ethnic groups as the Boise MSA. The only census tract that has a higher percentage of minority residents than the Boise MSA is CT 17 where about 87 percent of residents are white and about eight percent identify themselves as some other race or two or more races. In nearly all of the block groups, the largest percentage of minorities identified themselves as two or more races, generally accounting for between two and three percent of the total population compared to about 2.4 percent in the entire Boise MSA.

4.3.2.2 Poverty

Unlike race and ethnicity, which are similar to the region, poverty within the project area is higher in some census tracts and block groups. Census data show that about 8.4 percent of the residents residing in the Boise MSA are living in poverty, which is higher than Ada County (7.7 percent), but lower than the state (11.8 percent). Four of the six census tracts (16, 17, 18, and 21) within the project area have a higher percentage of residents living in poverty than the Boise MSA. The highest percentage of residents in poverty is found in CT 17 BG 1 (16.9 percent), CT 18 BG 3 (16.6 percent), CT 17 BG 2 (14.3 percent), and CT 21 BG 1 (13.2 percent). CT 17 BG 2 is also the only census block within the project area where the majority of dwelling units are renter occupied. It is likely that some apartment complexes and homes (either rental or owner occupied) may contain pockets of residents living in poverty. Proximity to the airport and I-84 likely makes rental units less expensive than other parts of the region and may contribute to concentrations of poverty within the area.

While poverty rates are higher in some census tracts than the Boise MSA, analysis at the block group level shows poverty to be concentrated in a few block groups while other block groups within the same census tract shows higher incomes. As an example, CT 18

has a higher median household income and a higher poverty rate than the Boise MSA, but when evaluating the census tract at the block group level defining CT 18, household incomes vary from \$36,944 to \$51,750 annually. Not surprisingly, BG 3, has the lowest median household income in CT 18 and has the highest percentage of people living in poverty while BG 1, which has the highest median household income in CT 18 has the lowest poverty rate. This may indicate a diversity of housing types supporting different income levels within the census tract. It could also indicate that areas with lower household incomes combined with higher poverty rates in some block groups may have more affordable housing than others.

4.3.3 Displacements and Relocation

Although federal-aid highway and road projects are designed to benefit the community at large, they may have a disproportionate impact on those whose real property must be acquired or whose homes and businesses are displaced. Title VI, the Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 (Uniform Act), and Title 23 of the United States Code (the law pertaining to the federal aid highway program) establishes the land acquisition policies for federal and federally funded programs and activities. The purpose of the Uniform Act is to ensure that displaced persons do not suffer injuries because of activities designed for the benefit of the public as a whole that are disproportionate to the impacts to the public as a whole, and to minimize hardship of displacement. The Uniform Act is designed to ensure that people whose real property is acquired, or who move because of projects receiving federal funds, will be treated fairly and equitably and will receive assistance in moving from the property they occupy. The Uniform Act requires agencies, in acquiring property for a project, to negotiate with property owners in a prompt and amicable manner so litigation may be avoided. Negotiations are based on the agency's estimate of just compensation, which is based on an appraisal of fair market value.

If the property to be acquired for a project is developed, the Uniform Act provides a number of measures to minimize the hardships of relocation. For example, no one may be displaced from his or her residence unless a comparable replacement residence has been offered, nor may a person be required to move in less than 90 days after an offer to purchase is made. Homeowners and tenants may receive payments for moving expenses and, if necessary, the increased cost of replacement housing. Businesses are eligible for moving expenses and certain costs to reestablish their business. In addition, displaced persons are offered advisory services, i.e., help in successfully relocating to a replacement site, including the determination of relocation needs, information concerning replacement properties, and timely written notifications of payment eligibility.

4.3.4 Community Services and Facilities

4.3.4.1 Medical Services

There are several medical facilities located near the project area, all north of I-84 and predominantly near downtown Boise. The nearest hospital is Saint Alphonsus, located approximately two miles north of the project area and is the only level II trauma center in the region. Other hospitals in the vicinity include Saint Luke's, U.S. Veteran's Hospital, Children of Hope Family Hospital, and the Intermountain Hospital of Boise.

The Boise Fire Department as first responders provides emergency medical services, although ambulance service is also provided by several area organizations. Saint Alphonsus Life Flight offers helicopter ambulance service to the region.

4.3.4.2 Fire and Police

Both the Idaho State Patrol (Region 3) and the Boise Police Department serve the project area. The Idaho State Police are responsible for traffic safety along I-84 with support from the Boise Police Department, when needed. The Idaho State Patrol operates a dispatch office west of Vista Avenue on West Elder Street. The Boise Police Department is generally responsible for public safety within the City of Boise. There are no local police facilities within the project area; the nearest substation is located at Overland and Vista Avenue north of the project area. Near the Boise Airport, the Boise Fire Department operates Station #7, which serves the Boise Airport and commercial areas along I-84. The Fire Department also operates Station #12, which is located on SH-21 east of the Gowen Road interchange and outside of the project area.

4.3.4.3 Public Services

The City of Boise provides garbage service for residential and commercial use. Garbage is hauled to the Hidden Hollow Sanitary Landfill, located in unincorporated Ada County, is just northwest of the Boise city limits. The landfill is projected to reach capacity in 2010. The county is currently evaluating sites for a new landfill, including sites south of the project area.

Utilities are described in Section 4.5.

4.3.5 Recreation

Several parks are located near the project area, as shown in Figure 1.2. Owyhee Park is a five-acre neighborhood park near Owyhee Elementary School that is used by both students and the public. Shoshone Park, a five-acre neighborhood park with playgrounds and tennis courts, is north of the Vista Avenue interchange and the New York Canal. Phillipi Park, located northwest of the Orchard Street interchange, is an eight-acre park with a playground, basketball court, and picnic facilities. Additionally, several smaller neighborhood parks can be found near the project area within residential areas.

4.4 GEOLOGY AND SOILS

Information from this section is from the *Phase I Materials Report and Geologic Reconnaissance Report* (CH2MHill, 2000).

4.4.1 Geology

Relatively flat river terraces dominate the geomorphology of the project area. The existing I-84 alignment is located along a terrace that is typically about 49 to 66 feet above the relatively flat land between the terrace and the Boise River to the north. Land to the southwest of I-84 is slightly higher than land to the northeast, although previous development activities in the area has resulted is loss of the majority of the original scarp between the two terraces. The highway alignment is relatively flat within the project area.

The regional geologic structure is dominated by downfaulting in the Snake River plain, which formed the Boise valley. Northwest trending faults have been mapped (in earlier geologic studies of the region) near the project area in older terrace gravel deposits south of the alignment, but none were identified that cross the existing mainline. These faults appear to be inactive due to the lack of surface offsets.

4.4.2 Soils

The Soil Survey of Ada County describes the types of soils found along the existing alignment as well drained soils that are moderately deep to a duripan. The soils formed in loess or silty alluvium, which is underlain by mixed alluvium or basalt. The survey also reports unified classifications of CL-ML for the soil, and indicated low strength and frost action as limitations for use as road subgrade.

4.5 UTILITIES

Information for this section is from the *Utility Study for the I-84 Orchard Street IC to Gowen Road IC Corridor Study* (Doherty and Associates, Inc., 2004) and the *Land Use and Socioeconomic Technical Report* (David Evans and Associates, Inc., 2007).

Along I-84, there are 21 buried utility crossings of I-84, 18 overhead crossings, 10 buried and one overhead utility that cross under the interstate structure or over an overpass. In addition, there are numerous utility facilities located within the existing I-84 right-of-way that run parallel to I-84. In areas where additional right-of-way at interchanges may be necessary, there are utility facilities present in county road rights-of-way and on private property. Major utilities that cross or are located within the I-84 right-of-way within the project area include:

• Fiber optic cables owned by Ada County, Syringa, ELI, Level 3 Communications, and Time Warner are buried along the northern side of I-84 for the length of the project. Fiber optic lines are also located within the Orchard Street, Vista Avenue, and Broadway Avenue rights-of-way.

- Overhead power and fiber optic cable lines are located on poles for the length of the project either on one or both sides of I-84 and along the Orchard Street, Broadway Avenue, and Gowen Road rights-of-way.
- A natural gas line owned by Intermountain Gas crosses I-84 and is buried west of the Orchard Street interchange.
- A buried petroleum gas line (Chevron) crosses I-84 west of the Orchard Street interchange at approximately the ramp termini for the Orchard Street interchange. The pipeline also crosses Orchard Street south of I-84 just south of the Orchard Street Street/Victory Road intersection. Another piece of the pipeline is located within Wright Street and I-84 right-of-way to the Vista Avenue interchange where it crosses Vista Avenue and continues south outside of the project area.
- A buried natural gas line owned by Intermountain Gas is located in the Orchard Street right-of-way west of I-84. There is also a natural gas line located south of I-84 that generally follows Wright Street east to Airport Way, where it ends south of the Vista Avenue interchange.
- Buried water (United Water) and sewer lines (City of Boise) are located along the south side of I-84 along Richenbacher Street, Wright Street, and Airport Way. Buried water lines are also located adjacent to the I-84 westbound on ramp at the Broadway Avenue interchange, and cross I-84 west and east of the Gowen Road interchange.
- Telephone (Qwest) and natural gas lines (Intermountain Gas) cross under the I-84 right-of-way approximately midway between the Orchard Street and Vista Avenue interchanges.
- ITD and ACHD traffic light intersection services.

The City of Boise provides water, sewer, and storm water management services for the Boise area, including the project area. ITD and ACHD provide storm water services within the I-84 right-of-way and some surrounding areas. The City operates three wastewater treatment facilities. The Gowen Road Wastewater Treatment Facility serves the project area and is located south of the Boise Airport on Gowen Road.

4.6 AIR QUALITY

Information for this section is from the Air Quality Technical Report: I-84 Orchard Street IC to Gowen Road IC Corridor Study (Washington Group, Inc., 2005)

The U.S. Environmental Protection Agency (EPA) and Idaho Division of Environmental Quality (IDEQ) regulate air quality in the project area. Under the Federal Clean Air Act, the EPA established the National Ambient Air Quality Standards (NAAQS), which are health-based standards that specify maximum concentrations for carbon monoxide (CO), particulate matter less than 10 microns in diameter (PM-IO), particulate matter less than 2.5 microns in diameter (PM-2.5), ozone, sulfur dioxide, lead, and nitrogen oxides. Idaho has adopted these Federal NAAQS for the state.

In 1979, Ada County was designated a "Non Classified Nonattainment Area" (NCNAA), which is a geographical region that has violated the NAAQS for CO. On December 27th, 2002 the EPA redesignated Ada County a "Maintenance Area" for that pollutant. The section of I-84 under analysis is located within the Maintenance Area for CO.

For PM-10, no classifications currently apply. Prior to 1999, Ada County was also designated a non-attainment for PM-10, however no violation for PM-10 has been recorded since 1991. In March 1999, the EPA signed a revocation of Ada County's pre-existing PM-10 standards and its associated designation. The ruling was challenged in court and settled in 2001. As part of the settlement Idaho was required to submit an update of the Northern Ada County's PM-10 State Implementation Plan (SIP) to the EPA. In September of 2003, the EPA approved the Northern Ada County PM-10 SIP Maintenance Plan and Redesignation Request.

The EPA has yet to recommend any models or quantitative procedures to accurately measure PM-10 or PM-2.5 concentrations along individual roads; therefore, neither PM-10 nor PM-2.5 concentrations were modeled. A voluntary project-level analysis was performed for this study and found no significant impact. Long-term air quality levels in the project area will be influenced through vehicle emissions rather than construction emissions.

4.7 NOISE

Information for this section is from the *Noise Technical Report: I-84 Orchard Street IC to Gowen Road IC Corridor Study* (Bionomics, Inc., 2005).

The project area was broken up into segments along the corridor based on land use patterns, consisting of 13 segments on the north side of the interstate and 12 segments on the south side. Receptors are shown in Figure 4.4. Of the 13 segments on the north side of I-84, there were three segments consisting of residential receptors:

- Segment One North, located between the existing wall on the north side of the freeway to the west of the project area to the Wells residence, located west of South Phillipi Street.
- Segment Four North, located on the westbound off-ramp on the Orchard Street interchange and continues along the interstate to the fields that are located just to the west of Owyhee Park.
- Segment Nine North located between the Vista Avenue interchange and the Broadway Avenue interchange on the north side along the Sunrise Rim neighborhood.

All noise levels are stated as hourly Leq (energy-averaged equivalent sound pressure level) in terms of dBA. The decibel (dB) is the noise level unit of measurement. The A-dBA, used in regulatory standards applicable to this project, was developed to

approximate the sensitivity of the human ear to the sound pressure levels of different frequencies. FHWA uses the Leq noise measurement as the basis to assess impacts that a roadway has on the sensitive receptors that are located along the proposed road.

Field measurements were taken and a computer noise analysis was performed to project the noise levels in the letting year of 2002 and design year of 2035. Ambient noise levels ranging from 65 to 82 Leq (dBA) were taken during a three-day period in 2003 and a five-day period in 2005. Field measurements taken in 2003 showed substantial variance from modeled results; therefore field measurements were repeated in 2005 to verify results. Once again, the field results were substantially higher. Highly degraded pavement on I-84 with numerous cracks, divots, and bumps exacerbate noise caused by vehicle tire contact with the paved surface and contribute to the 2005 elevated field measurements. Results for the existing alignment using 2005 traffic volumes range from 67 Leq (dBA) located on Philippi Street to 76 Leq (dBA) located at the Mountain View RV Park receptor site. Readings taken at Mountain View RV Park were substantially lower due to a brick wall between the park and the pavement.

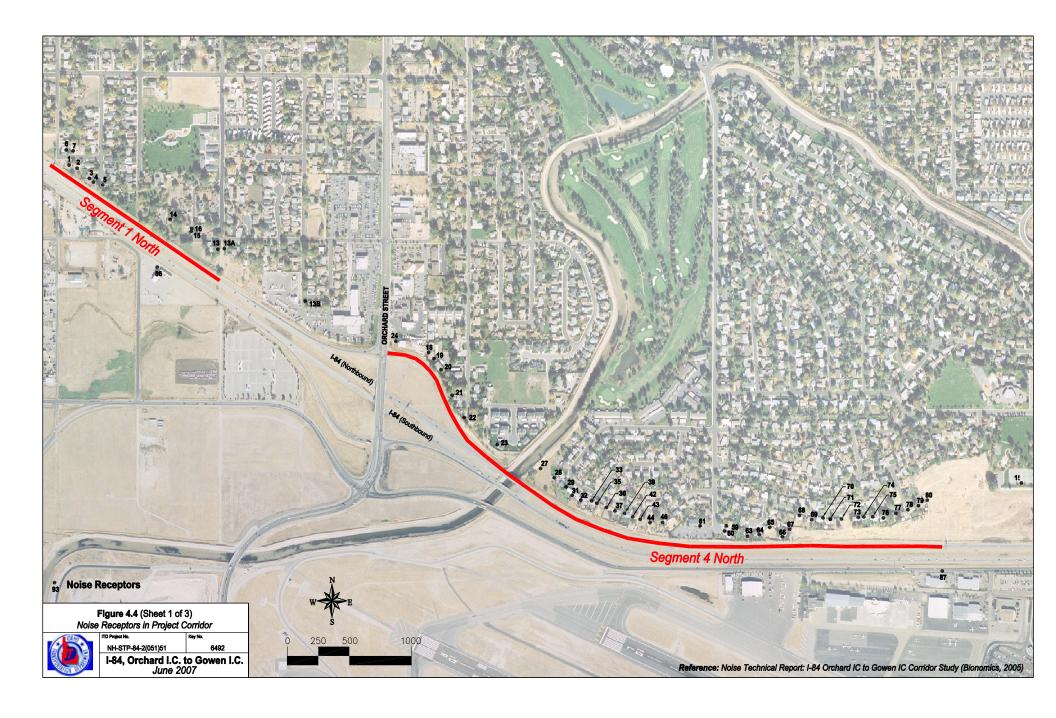
4.8 CULTURAL RESOURCES

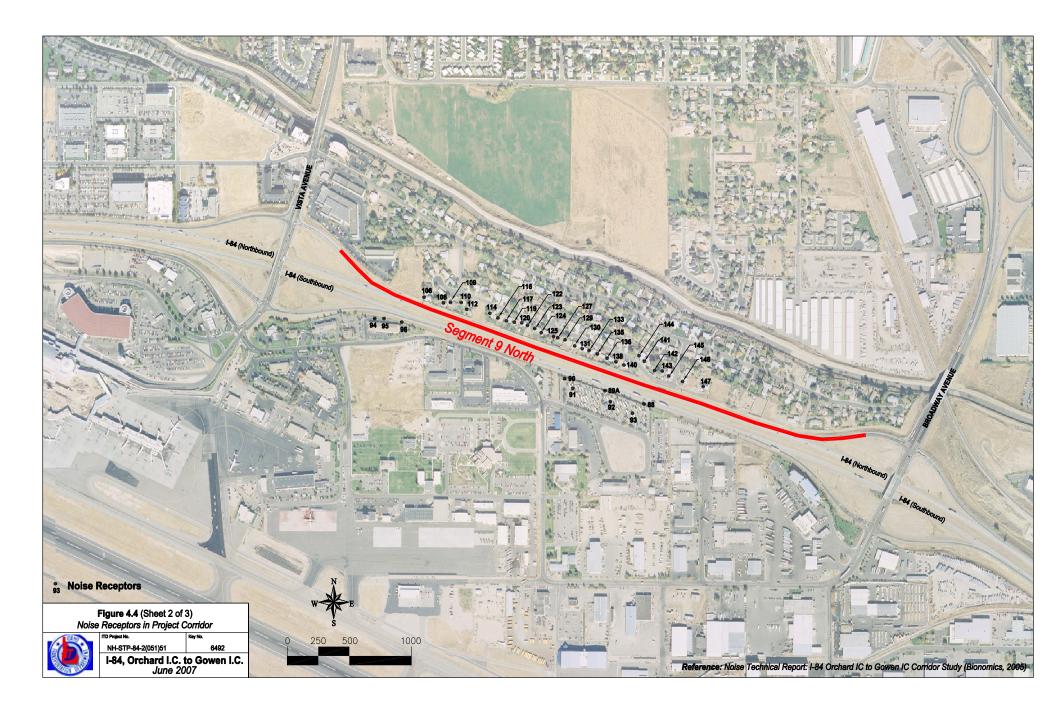
Information for this section is from the *Archaeological and Historic Survey Report* (Bionomics, 2005).

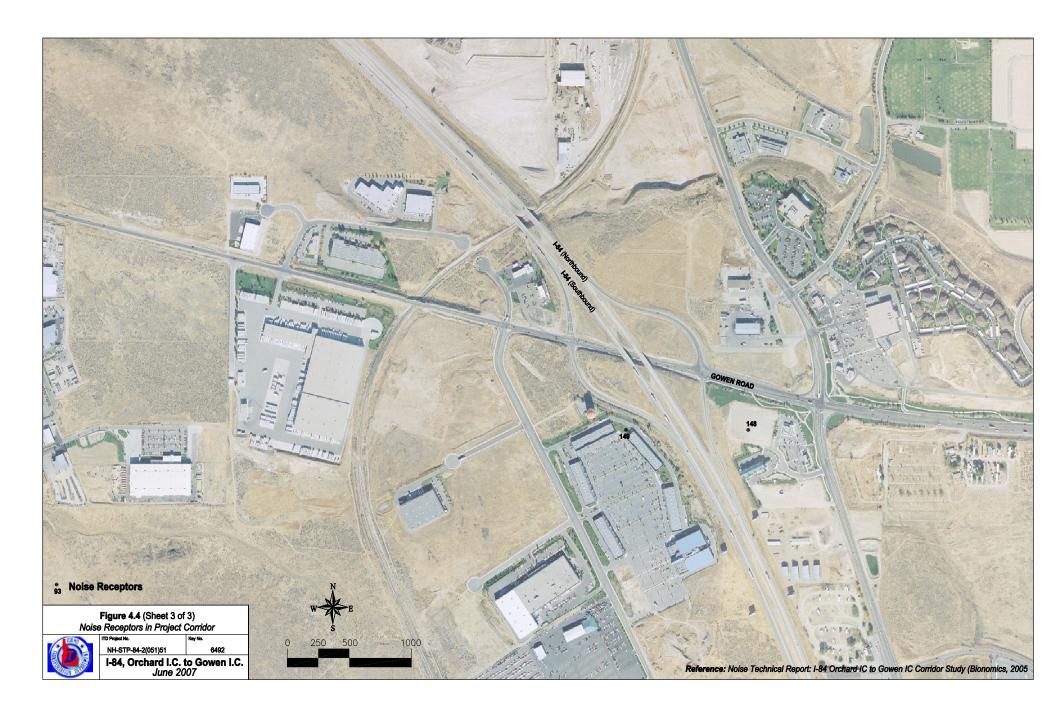
The area of potential effect (APE) for the project includes all locations of ground disturbing activities, all areas that would be visually impacted by the project, and areas of other secondary effects, such as noise or changes in setting.

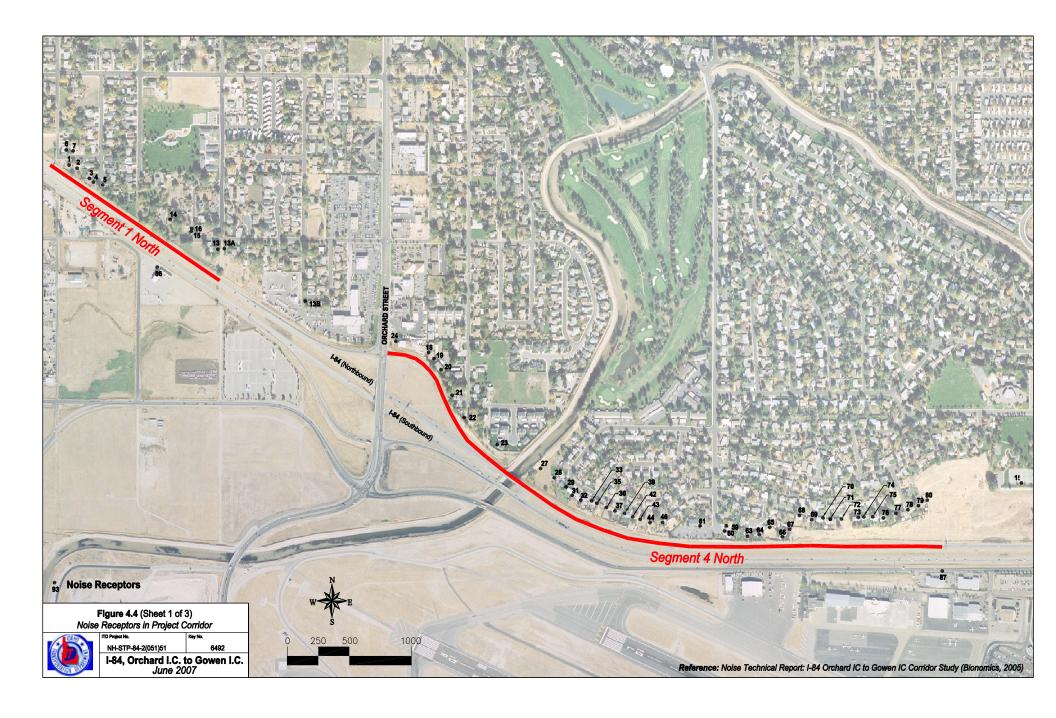
The archaeological and historical investigation indicated that much of the development throughout the project corridor has been related to gravel pit operations, light and heavy industrial use, commercial use, and residential development that took place in the late 1960s through the 1980s. Assessors' records also revealed that a housing development located near the interstate right-of-way just east of the Orchard Street Interchange was constructed between the late 1940s and the early 1950s.

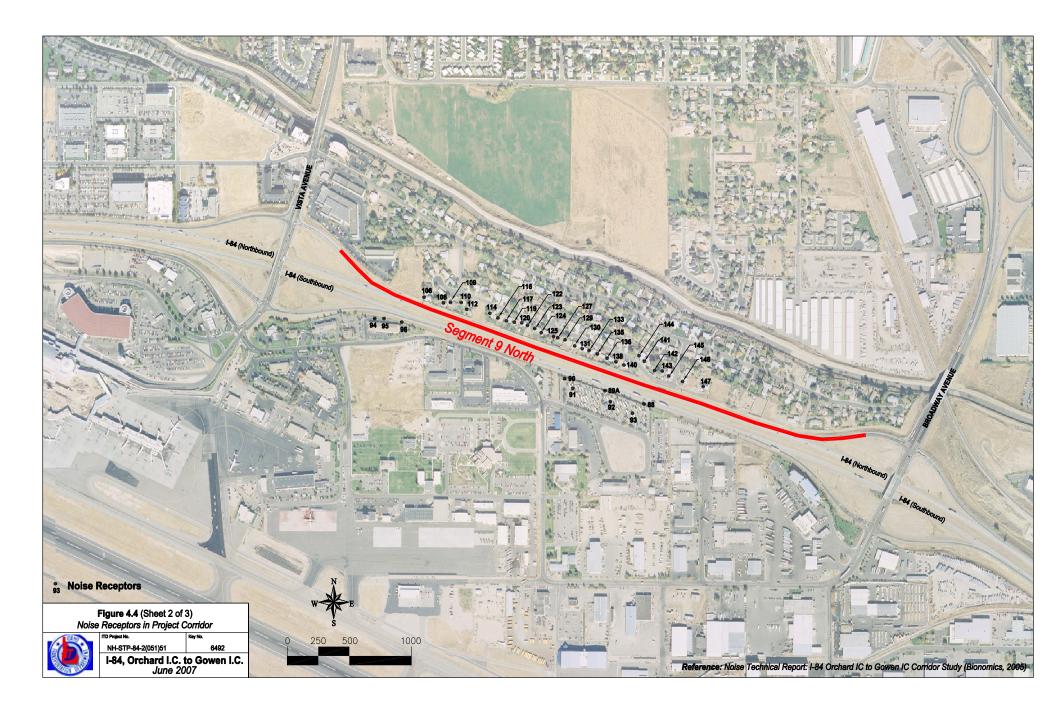
The project corridor between the Gowen Road interchange and the Eisenmann Road interchange was not surveyed because this segment would only be resurfaced and no new construction would occur.

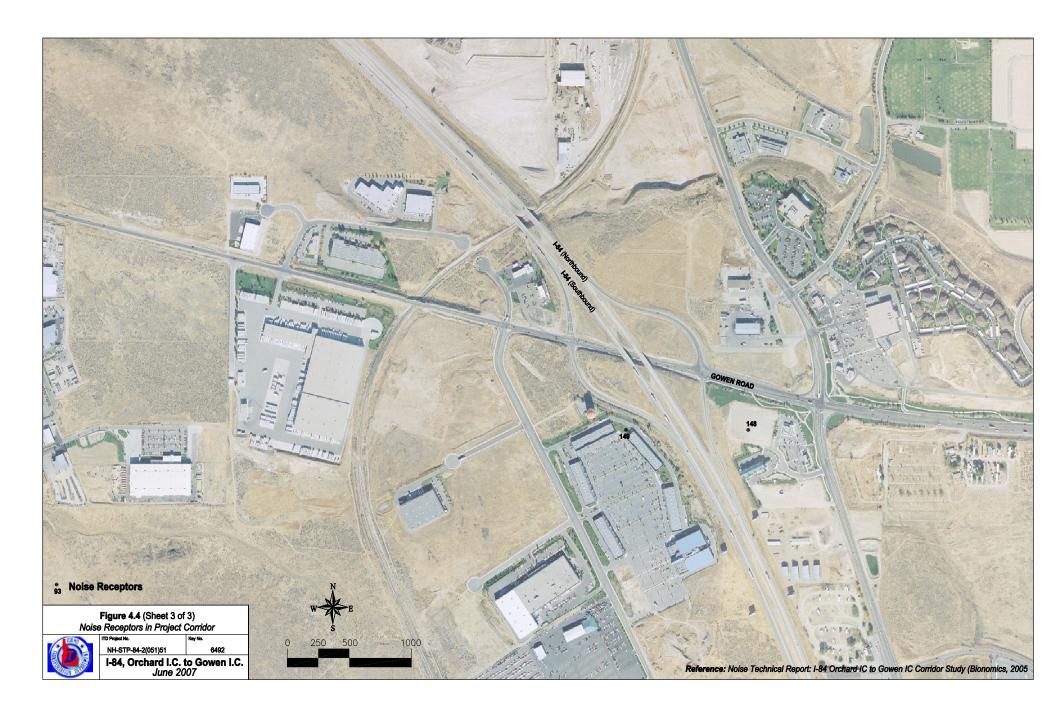












A review of historical GLO plat maps at the State BLM office indicated that in 1910 the Boise City/Owyhee Stage Road was located one-half mile to the northwest of the Orchard Street interchange. Five cabins and one house were located within one half mile of I-84 between the Gowen Road interchange and the mouth of the Eisenmann Road interchange, and a road roughly followed the current alignment of I-84 in Township 2 North, Range 3 East, Sections 18, 19, and 20. Although this road was present on the 1867 plat map, it is not a segment of the Oregon Trail. The Boise City/Owyhee Stage Road near the project has been obliterated by the interstate and residential development and the road indicated on plat maps along the interstate near the Gowen Road interchange is no longer visible due to interstate construction and commercial development. Although a survey was not conducted to determine whether any of the cabins or the house indicated on the 1910 plat map still existed, they were all located in areas that are now developed or areas that repeatedly burned over the last century and it is unlikely that they still exist.

There are two previously recorded resources within the project APE that are eligible for listing in the National Register of Historic Places –the New York Canal and the Idaho Northern and Pacific Railroad/Union Pacific Railroad (Figure 4.5). These properties were determined to be eligible for the National Register of Historic Places during previous investigations under Criterion 'A' because they are both associated with events that have made a significant contribution to the broad patterns of local history, specifically irrigation in the Boise Valley and regional transportation.

4.8.1 New York Canal

Initial plans for the New York Canal were drafted by A.D. Foote and the Idaho Mining and Irrigation Company in 1882 and by 1888 a survey was undertaken to establish the best route for the main canal. The earliest sections of the main canal were constructed in the late 1800s and had a carrying capacity of 200 cubic feet per second (cfs). In 1906, the Reclamation Service requested bids to enlarge the main canal, and construction of an eight-mile stretch of the canal was begun from Indian Creek to Deer Flat Reservoir. This stretch was completed in 1909, increasing the carrying capacity of the canal to 1,500 cfs and water was stored for the first time in Deer Flat Reservoir. The canal was enlarged again between 1909 and 1912 to increase the carrying capacity to its current level of 2,800 cfs. Today the canal is 40 feet wide at the bottom and the water runs eight feet deep at full capacity. The section of canal that runs through Indian Creek is unlined, but the remainder of the canal is lined with concrete four inches thick

The Orchard Street and Broadway Avenue interchanges span segments of the New York Canal.

4.8.2 Idaho Northern and Pacific Railroad/Union Pacific Railroad

Originally, the entire section of track that extends through Boise south and eastward toward Mountain Home and includes the section that comes within one-half mile of the

APE was constructed as part of the Oregon Short Line Railroad. The railroad functioned as the Oregon Short Line until 1900 when Union Pacific took over management of the track. Segments of the INPRR pass within one-half mile of the APE and the interchange at Broadway Avenue spans a section of this railroad. Union Pacific still owns the track from Nampa through Boise to the Gowen Road overpass, although this segment is now leased by the Idaho Northern and Pacific Railroad (INPRR). Union Pacific sold a segment of its track from the Gowen Road overpass to the old Orchard Street Station to the City of Boise in 2000.

This section of the historic railroad passes under a portion of the APE near the Gowen Road Gowen Road.

4.9 WATER QUALITY

Information in this section is from the *Drainage Technical Report and Water Resources Technical Report* (Doherty and Associates, Inc., 2004).

4.9.1 Surface Water

Existing streams in the project area include Three-Mile Creek, Five-Mile Creek, and the New York Canal. Three-Mile Creek is a seasonal creek controlled by flow from the New York Canal and turns into an irrigation lateral downstream of the I-84 crossing. Five-Mile Creek is a perennial creek with a total drainage basin of 80.2 square miles, approximately 70.5 of which are upstream of the existing I-84 crossing. Both streams are channeled through culverts under the interstate and primarily used for irrigation purposes. The New York Canal is a large, seasonal canal fed by the Boise River at the diversion dam.

Within the project limits there is 107 acres of existing impervious area. I-84 is 108 feet from a drainage pond located near the Gowen Road interchange and 65 feet from Five-Mile Creek at Isaac's Canyon. The seasonal flow rate for Three-Mile Creek is four cubic feet per second (cfs). The average annual flow rate for Five-Mile Creek is 5.64 cfs.

Existing drainage along I-84 generally sheet flows to the nearest outfall or retention/detention pond. Runoff from all four quadrants of the Orchard Street interchange drains to Three Mile Creek. Between the Orchard Street and Vista Avenue interchange, most of the runoff drains to the existing St. Andrews Detention Pond. Runoff from the Broadway Avenue to Gowen Road interchange sheet flows out of the right-of way and onto adjacent property before infiltration or evaporation, and within the right-of way between the Gowen Road interchange and Five Mile Creek. Median drainage is collected via drop inlets and conveyed via pipe to Three Mile Creek. On-site drainage west of Orchard Street is collected by an existing storm sewer system.

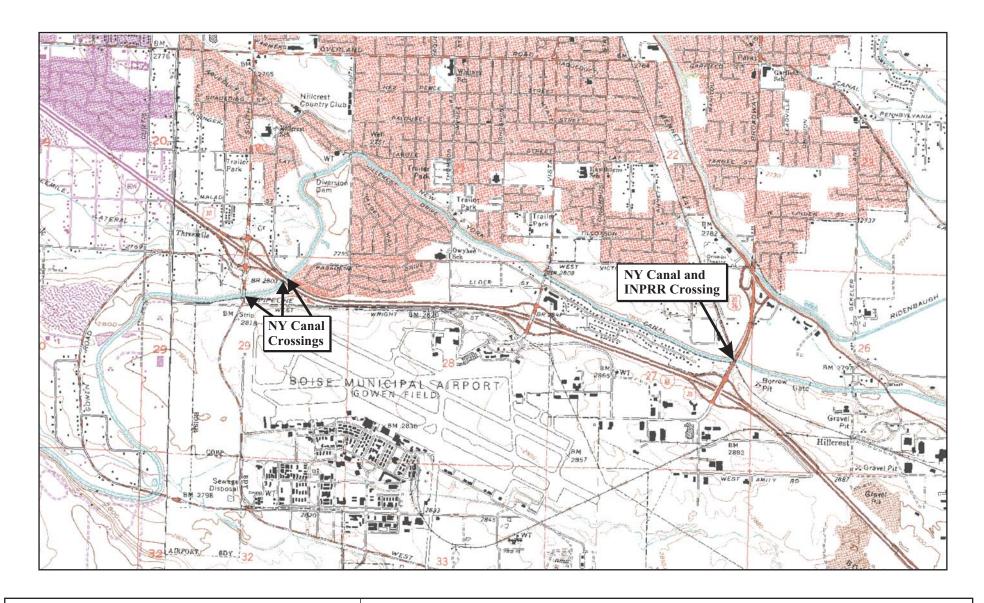


Figure 4.5 (Sheet 1 of 2) Historic Properties and Cultural Resources (Properties Near Orchard Street Interchange)



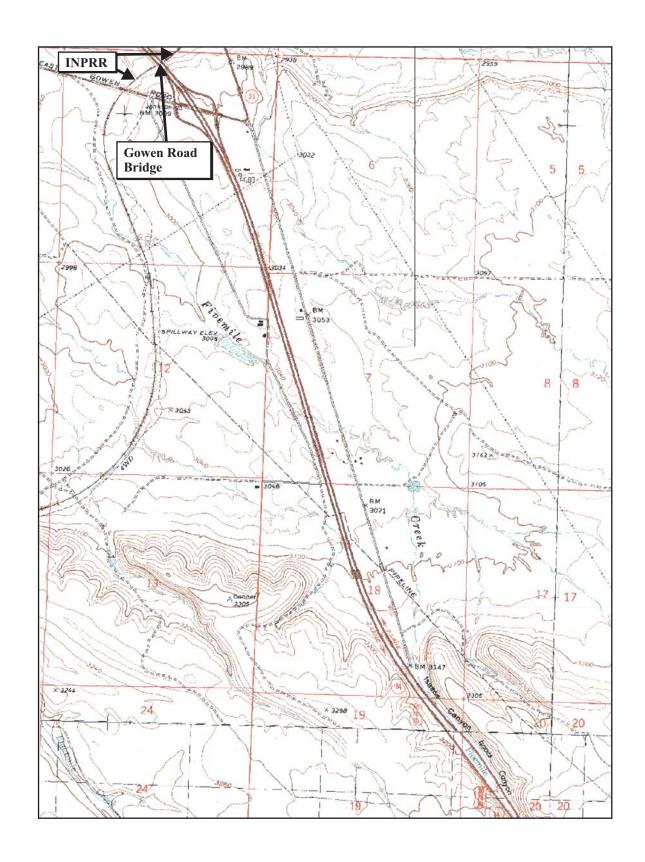
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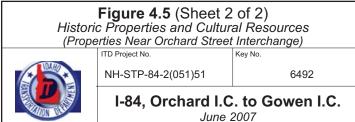
6492

I-84, Orchard I.C. to Gowen I.C. June 2007



Reference: Archaeological and Historic Survey Report (Bionomics, 2005)





LEGEND



Reference: Archaeological and Historic Survey Report (Bionomics, 2005)

Surface water pollutant loading analysis indicates that Three-Mile Creek and Five-Mile Creek exceed EPA acute criteria for copper, zinc, and lead. Copper for both creeks currently exceed the EPA Nationwide Urban Runoff Program (NRUP) suggested threshold criteria. The project is located within a MS4 permit area that requires no net increase in pollutant loads.

The project area is not located within the 100-year floodplain. FEMA maps designate the area near Five-Mile Creek as Zone A indicating that no data was available at the time of map publishing.

4.9.2 Groundwater

No special surface or groundwater designations are located within the project limits. Both the Boise Front Groundwater Management Area and the Southeast Boise Groundwater Management Area are located in the project vicinity. During and after project construction, these management areas may affect the project if a new well is drilled or there is a change in the diversion of groundwater.

According to the Idaho Department of Water Resources, there are 27 wells located within 1/4 mile of I-84 between the Orchard Street and Gowen Road interchanges, as shown in Figure 4.6. These wells vary in use from single residences or businesses to multiple users drawing water from a single well.

4.10 WETLANDS

Information in this section is from the *Wetlands Delineation Report* (David Evans and Associates, Inc., 2005).

Executive Order 11990 (Protection of Wetlands) requires that Federal agencies take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for:

- Acquiring, managing, and disposing of Federal lands and facilities;
- Providing Federally undertaken, financed, or assisted construction and improvements; and
- Conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities. All wetlands are protected by this executive order.

The analysis of wetlands conducted on this site was based on the routine (on-site) methodology of the Corps of Engineers Wetlands Delineation Manual. This method requires that evidence of three parameters (hydrophytic vegetation, hydric soils, and wetland hydrology) be simultaneously present for a jurisdictional wetland determination. The State of Idaho does not have a statewide wetland rating system; therefore the

jurisdictional wetland areas were evaluated for functional value according to the 1999 MDT Montana Wetland Assessment Method.

Five locations (Figure 4.7) were evaluated within the project area. Site-specific evaluations were determined based upon findings of the preliminary research. Areas identified for site-specific evaluations included areas listed by the National Wetland Inventory as wetlands, areas within and adjacent to blue-line drainage's as identified by the USGS quadrangle topographical maps, and areas visually observed and determined to have the potential of one or more of the wetland parameters of hydrology, hydric soils, or vegetation. One or more formal data plots were established at each location and evaluated for wetland hydrology, hydric soils, or vegetation.

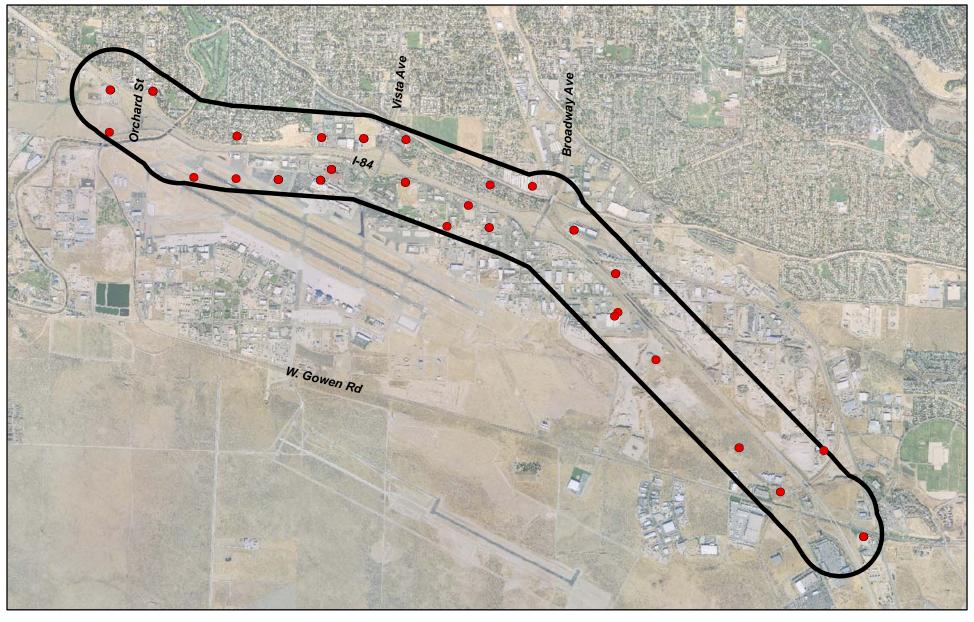
Based on the presence of hydrophytic vegetation, hydric soils, and positive indicators of wetland hydrology, two of the five sites surveyed were identified as wetlands during the field investigation. Wetland A (Site 3) is not connected to any waters of the United States and did not appear to have any inflow or outflow and therefore is deemed to be non-jurisdictional. This wetland is approximately 0.02 acres in size and runs parallel to the Vista Avenue off-ramp for eastbound traffic.

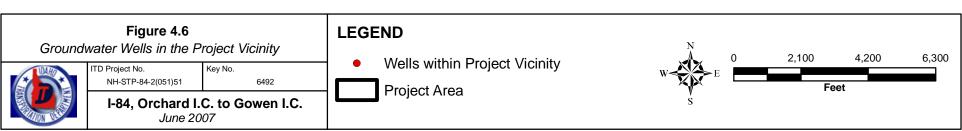
Wetland B (Site 4) lies in close proximity to Three-Mile Creek, classified as waters of the U.S. and is connected to the creek via a culvert. This connection makes Wetland B a jurisdictional wetland. Wetland B is a depression area behind an overflow airport parking lot beside I-84. It is approximately 0.05 acres in size.

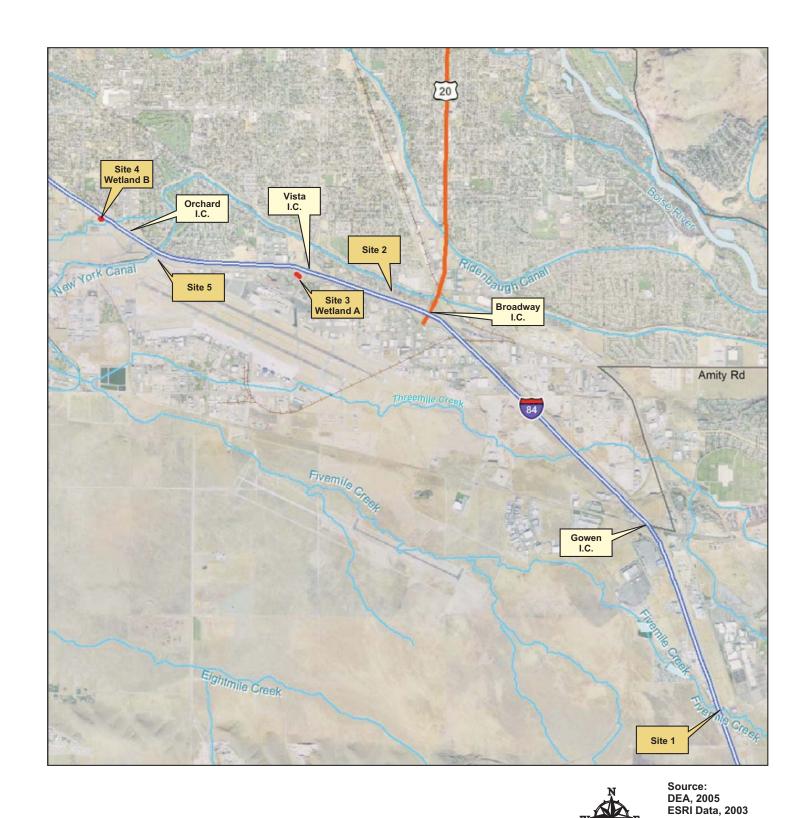
4.11 THREATENED AND ENDANGERED SPECIES

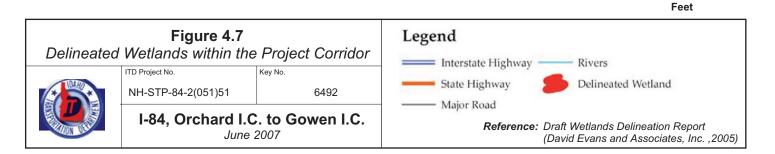
Information in this section is from the *Endangered Species Act (ESA) No Effects Determination Memorandum* (David Evans and Associates, Inc., 2004).

As shown in Table 4.3, five listed species or candidates for listing under the ESA are known or expected to occur in Ada County. These five species include: gray wolf (*Canis lupus*), bald eagle (*Haliaeetus leucocephalus*), bull trout (*Salvelinus confluentus*), Yellow-billed cuckoo (*Coccyzus americanus*), and Idaho Springsnail (*Pyrgulopsis idahoensis*). Proposed critical habitat for bull trout also occurs in Ada County. Local surveys indicated that no ESA-protected species are likely to occur in the project area.









4,000

2,000

Table 4.3. Federally Listed and Candidate Fish and Wildlife Species in ADA County

Common Name	Scientific Name	Federal Status
Gray Wolf	Canis lupus	XN – Experimental/Non-essential population
Bald Eagle	Haliaeetus leucocephalus	Threatened
Bull Trout	Salvelinus confluentus	Threatened
Yellow-billed cuckoo	Coccyzus americanus	Candidate
Idaho Springsnail	Pyrgulopsis idahoensis	Endangered

Source: U.S. Fish and Wildlife Service (USFWS) Pacific Region web page (http://idahoes.fws.gov/county/ada.htm), March 13, 2007.

4.12 VISUAL RESOURCES

Residents of the Sunrise Rim and Hillcrest neighborhoods and Mountain View RV Park located adjacent to I-84 are the most sensitive viewer group for the project because of their long-term direct views of the I-84 right-of-way, although, based on the input provided by stakeholders during the public and agency scoping process, visual resources were not raised as an issue that could have a bearing on the project.

Foreground views of the I-84 right-of-way that are immediately visible to viewers from adjacent properties and by travelers on I-84 mainline are generally consistent through the project area. These views are characterized by paved travel lanes of the I-84 mainline and interchange ramps, vegetated side slopes, concrete interchange structures, and the New York canal and railroad tracks where they transect I-84 beneath structures. The midground visual setting of the project area is characterized by the various land uses (described in Section 4.2.2) that are situated on either side of I-84. Distant views from I-84 within the project area are generally limited to the foothills and mountains located northeast and east of the Boise urban area.

4.13 HAZARDOUS MATERIALS

Information in this section was derived from the *Phase I Environmental Assessment* (American Geotechnics, 2005).

Investigations were conducted to assess the potential occurrence of hazardous materials in the project area and to confirm any further potential environmental concerns between the Orchard Street and Eisenmann Road interchanges. A field reconnaissance was performed to confirm the results of the data review and identify current surface conditions and land uses within the corridor, including the on- and off-ramp areas at the interchanges. Overall, 101 locations were investigated, as shown in Figure 4.8, which confirmed that of the 101 sites, 18 sites could contain hazardous materials. Sites potentially containing hazardous materials are described in Table 4.4.

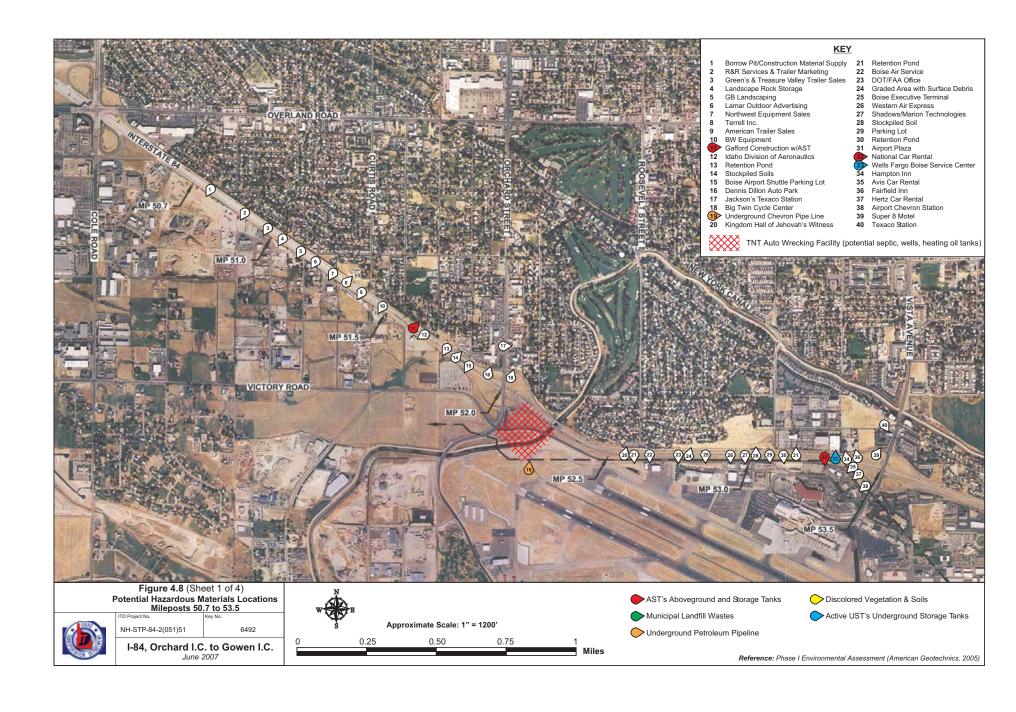
Table 4.4. Potential Locations with Hazardous Materials

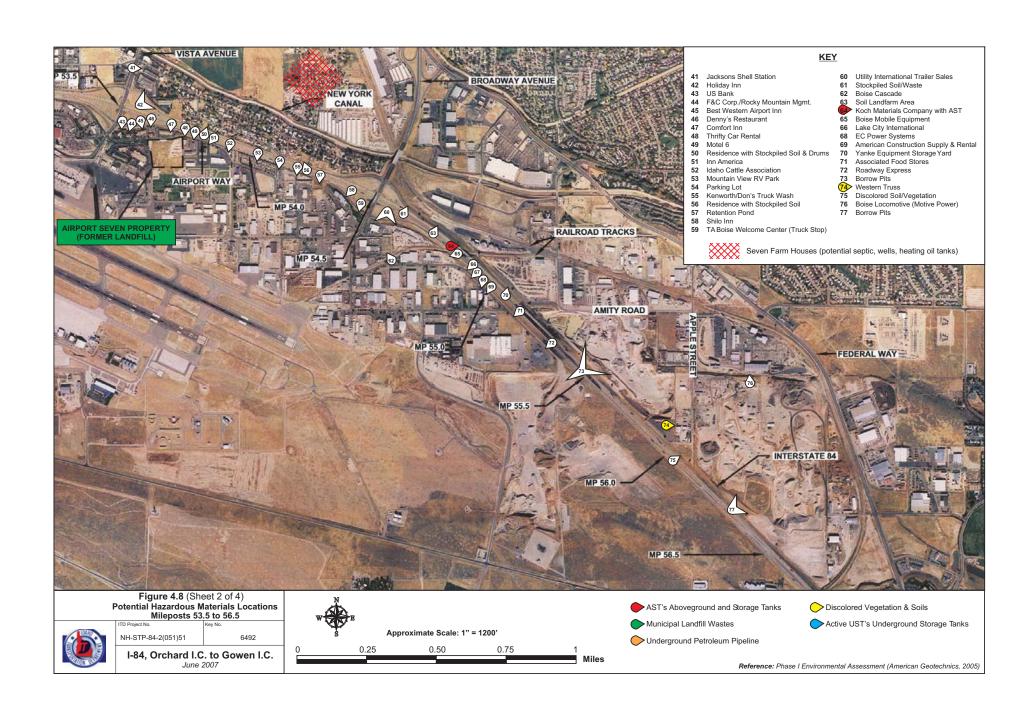
Site #	Description
Confirmed	d Sites with Hazardous Materials
64	Koch Materials Company facility contains numerous aboveground storage tanks (ASTs).
N/A	Airport Seven Property is a vacant site located southeast of the Vista Avenue Avenue interchange and is reportedly underlain by municipal landfill wastes.
N/A	Pipe Line Company is located parallel to I-84 adjacent to the Boise Municipal.
74	Western Truss facility has an area of discolored soil/vegetation was observed north of and adjacent to the right-of-way.
N/A	Numerous commercial and industrial properties along both sides of I-84 currently store heavy equipment, construction materials, and/or hazardous materials.
50	An exposed backyard of an adjacent residence located adjacent to the I-84 right-of-way contains two plastic drums of unknown use and contents.
14,28,98 99,61	Several areas of stockpiled soil, rubble, and apparent construction debris were observed adjacent to the right-of-way along both sides of I-84.
33	Wells Fargo Bank Service Center facility, approximately 20 feet north of the right-of-way, has an active underground storage tank (UST).
N/A	An exposed backyard of an adjacent residence north of the right-of-way has an AST of unknown use and contents.
32	A National Car Rental parking lot north of the right-of-way has an AST of unknown use and contents.
88	A property formerly operated as Elliott Lumber, at least 200 feet east of the right-of-way hasfour ASTs of unknown use and contents.
93	Willis Shaw Frozen Express east of the right-of-way ahs an AST of unknown use and contents.
N/A	Across approximately 1½ acres of graded land north of and adjacent to the right-of-way has plastic pipe fragments (e.g., PVC and ABS), brick, and other construction debris.
N/A	Eighty-three electrical transformers were observed within approximately 100 feet of both sides of the right-of-way.

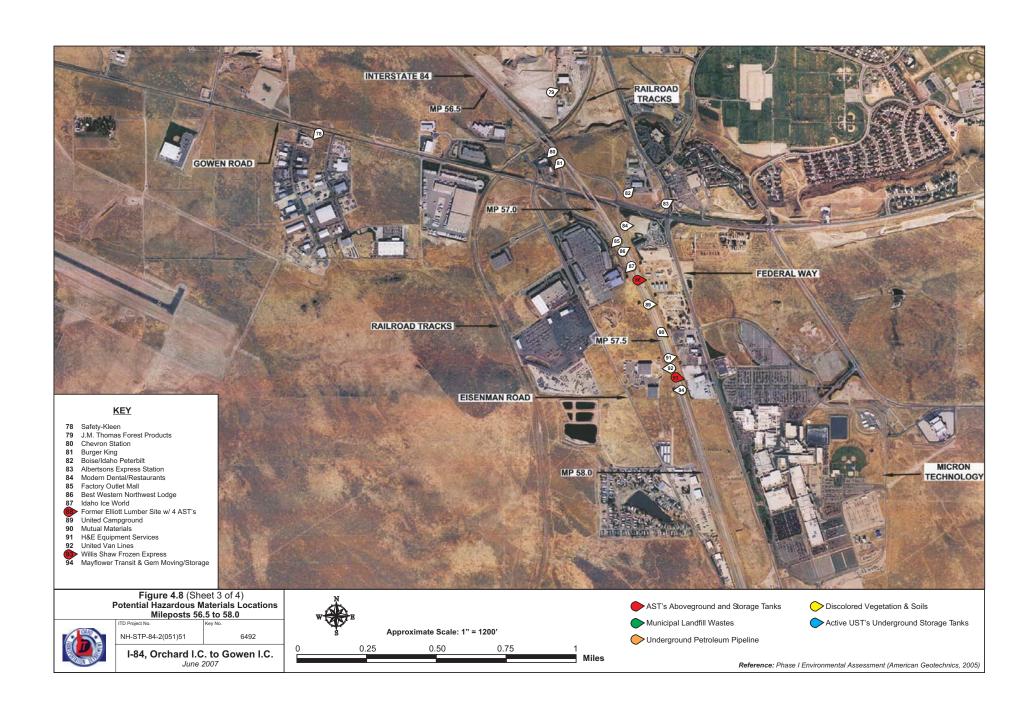
Source: Phase I Environmental Assessment (American Geotechnics, 2005).

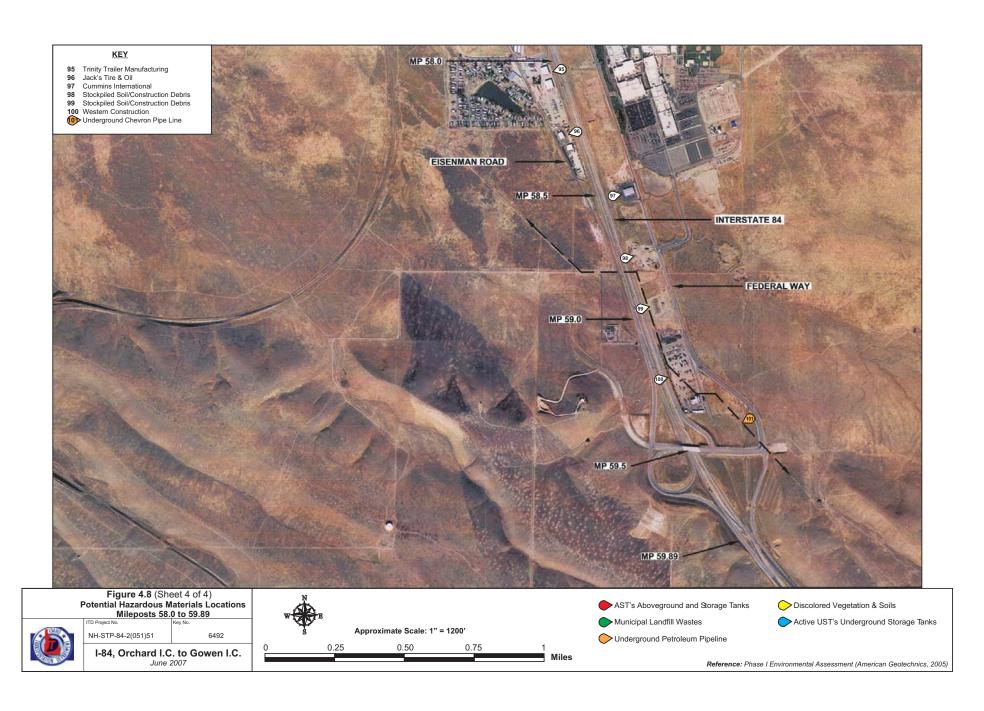
Two sites identified from the regulatory database search were identified as Resource Conservation and Recovery Act (RCRA) treatment, storage and disposal (TSD) facilities. The Boise Locomotive Company facility (currently Motive Power) is between Federal Way and Apple Street. The Safety-Kleen Systems, Inc. facility is located on Gowen Road between the Airport and I-84. Both sites were identified as having multiple violations of RCRA administrative requirements.

There is an approximately 6.7-acre vacant site located about 200 to 300 feet south of the eastbound on-ramp at the Vista Avenue interchange. The property is reportedly underlain by a former borrow pit into which municipal landfill wastes were placed from approximately 1958 to 1965. The northern extent of the waste disposal area is unconfirmed, but historic photographs indicate that the borrow pit may have extended to within 10 feet or less of the southern I-84 right-of-way.









Although no longer present, an auto wrecking facility and former farmhouses replaced by I-84, may be the sites of potential septic systems, wells, heating oil tanks, and/or other underground structures. The disposition of such structures or other features was not confirmed during the assessment. However, regulatory agency interviews indicate the auto wrecking facility may have been located in the southeast of the intersection of Orchard Street and Victory Road. The general location of the farmhouses may be northwest of the New York Canal.

Clean-up activities have reportedly been completed for 42 of the 46 identified leaking underground storage tank (LUST) sites within the project area. The remaining 4 sites include the National Car Rental, the Boise Air Terminal-ASR site, the Boise City White Maintenance Shop site, and the Smith Detroit Diesel Allison site. No other information is available for these 4 sites.